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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Babak Rezvani

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EXAMINER

TRAN, PHILIP B

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,981

Applicant(s)

REZVANI ET AL.

Examiner

Philip B Tran

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Inventorship

1. Applicant is reminded of a letter regarding inventorship sent on 09/05/2003 [see Paper No. 4]. The request to correct the inventorship of this nonprovisional application under 37 CFR 1.48(a) is deficient because:

An oath or declaration by each actual inventor or inventors listing the entire inventive entity has not been submitted.

2. The new oath/declaration submitted on October 09,2002 is not signed by the Babak Rezvani and Jack Chen. The previous oath/declaration submitted does not alleviate this discrepancy because the previous oath/declaration does not include inventor Edward Kalin.

Specification

3. The abstract of the disclosure is objected to because the abstract is too long (more than 150 words). Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 11-14, 18, 27-28 and 30 of the instant application are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over some claims of U.S. Patent No. 6,621,827.

Regarding claim 11, claim 2 of U.S. Patent No. 6,621,827 contains every element of claim 11 of the instant application and as such anticipate claim 11 of the instant application.

Regarding claim 12, claim 3 of U.S. Patent No. 6,621,827 contains every element of claim 12 of the instant application and as such anticipate claim 12 of the instant application.

Regarding claim 13, claim 4 of U.S. Patent No. 6,621,827 contains every element of claim 13 of the instant application and as such anticipate claim 13 of the instant application.

Regarding claim 14, claim 5 of U.S. Patent No. 6,621,827 contains every element of claim 14 of the instant application and as such anticipate claim 14 of the instant application.

Regarding claim 18, claim 6 of U.S. Patent No. 6,621,827 contains every element of claim 18 of the instant application and as such anticipate claim 18 of the instant application.

Regarding claim 27, claim 7 of U.S. Patent No. 6,621,827 contains every element of claim 27 of the instant application and as such anticipate claim 27 of the instant application.

Regarding claim 28, claim 8 of U.S. Patent No. 6,621,827 contains every element of claim 28 of the instant application and as such anticipate claim 28 of the instant application.

Regarding claim 30, claim 9 of U.S. Patent No. 6,621,827 contains every element of claim 30 of the instant application and as such anticipate claim 30 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Objections

6. Claim 11 is objected to because of the following informalities:

Each limitation ending with a semicolon should be on a separated line for clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 30 recites the limitation "the command" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "the virtual representation" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5, 8 and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Page et al (Hereafter, Page), U.S. Pat. No. 5,329,619.

Regarding claim 1, Page teaches a service broker (= service broker 14) [see Fig. 2 and Abstract] for processing data from a data network (= managing service requests from, and responsive services provided by, a plurality of clients and servers

(communication via LAN or WAN) in the heterogeneous environment) [see Abstract and Col. 4, Lines 23-41 and Col. 6, lines 19-36] including at least one data source (= server 12) [see Fig. 2 and Abstract], comprising :

a first communication module (= initialization routine) for initiating communication with a moderator (= manager such as communication manager/virtual store manager) and adapted to receive data from the moderator (i.e., establishing the broker environment, obtaining the necessary storage, initiating various control blocks, queues and tables, setting up a virtual address entry structure for the virtual storage manager, etc.) [see Col. 16, Lines 26-39 and Col. 28, Lines 41-52];

a second communication module (= dispatcher) for sending data to at least one of the data source and the moderator (= manager) (i.e., activating worker components and various managers and passing requests to the worker components for processing) [see Col. 16, Lines 45-66];

a service-action module (= worker components) for processing the received data and for performing a task based on the processed data (i.e., processing participant requests) [see Col. 16, Lines 40-44]; and

an export module (= part of worker components) in communication with the service-action module and for publishing data (= sending data) based at least in part on the performed task to the data network (i.e., worker components consist of all routines that deal with the various functions such as register, send , receive, etc.) [see Col 16, Lines 40-44]. This suggests that after receiving data requests, worker components process the received data requests and then store and send/forward data request

(publish data) to the server (data source) [see Fig. 6 and Abstract and Col. 16, Lines 40-44].

Regarding claim 2, Page further teaches the published data is published to at least one of the data source and the moderator (i.e., after receiving data requests, worker components process the received data requests and then store and send/forward data request (publish data) to the server (data source)) [see Fig. 6 and Abstract and Col. 16, Lines 40-44].

Regarding claim 3, Page further teaches the moderator includes a data store (i.e., managing the available storage and ensuring efficient use of the available storage in a changing environment) [see Col. 28, Line 47-52] and the first communication module receives data from the data store (i.e., obtaining the necessary storage) [see Col. 16, Lines 26-39].

Regarding claim 4, Page further teaches the data store stores data received from the at least one data source (i.e., maintaining relevant information and parameters in several links data structure including control blocks, tables and queues) [see Figs. 6 & 7G & 8 and Col. 19, Line 59 to Col. 20, Line 2 and Col. 45, Line 64 to Col. 46, Line 17].

Regarding claim 5, Page further teaches the data store is a command queue (= message queues) and the data received from the data source is a command which is

intended to be processed by the service-action module (= a worker component) (i.e., a worker queue structure is used to pass requests to the worker components and worker components are responsible for the processing of participant requests dealing with various functions such as register, send, receive, etc.) [see Col. 16, Lines 40-44 and Col. 16, Lines 66-67], the first communication module receiving the command from the queue (i.e., maintaining relevant information and parameters in several links data structure including control blocks, tables and queues and message queues are arranged as a linked list like the control blocks) [see Figs. 6 & 7G & 8 and Col. 19, Line 59 to Col. 20, Line 2 and Col. 23, Lines 58-60 and Col. 45, Line 64 to Col. 46, Line 17].

Regarding claim 8, Page teaches the performed task comprises communicating a command based at least in part on the processed data to a device connected to the service broker (i.e., worker components are responsible for the processing of participant requests dealing with various functions such as register, send, receive, etc.) [see Figs. 6 & 7G & 8 and Col. 16, Lines 40-44].

Regarding claim 31, Page further teaches the first communication module (= initialization routine) is capable of handling a device identifier (i.e., establishing the broker environment, obtaining the necessary storage, initiating various control blocks, queues and tables, setting up a virtual address entry structure for the virtual storage manager, etc. [see Col. 16, Lines 26-39 and Col. 28, Lines 41-52] and service control

block (SCB) and conversation control block (CCB) are created including IDs [see Col. 19, Line 66 to Col. 20, Line 65]).

Regarding claim 32, Page further teaches the first communication module (= initialization routine) is capable of handling a class of device identifiers (i.e., establishing the broker environment, obtaining the necessary storage, initiating various control blocks, queues and tables, setting up a virtual address entry structure for the virtual storage manager, etc. [see Col. 16, Lines 26-39 and Col. 28, Lines 41-52] and service control block (SCB) and conversation control block (CCB) are created including IDs [see Col. 19, Line 66 to Col. 20, Line 65]). This is a service broker system for clients and servers operating in a heterogeneous computing environment [see Abstract and Col. 1, Lines 9-11] and thus it suggests that the first communication module (= initialization routine) is capable of handling a class of device identifiers (= multiple devices wherein each device has an ID).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page et al (Hereafter, Page), U.S. Pat. No. 5,329,619 in view of Jeske, U.S. Pat. No. 5,974,443.

Regarding claim 6, Page does not explicitly teach the first communication module communicates with the moderator via the HTTP protocol. However, Page does suggest the use of client/server environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server [see Jeske, Fig. 1 and Col. 2, Line 54 to Col. 3, Line 7]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server, disclosed by Jeske, into the system of a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL.

Regarding claim 7, Page does not explicitly teach the data source communicates with the moderator via the HTTP protocol. However, Page does suggest the use of client/server environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server [see Jeske, Fig. 1 and Col. 2, Line 54 to Col. 3, Line 7]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server, disclosed by Jeske, into the system of a service broker for processing data between

client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL.

13. Claims 9-11, 18-30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page et al (Hereafter, Page), U.S. Pat. No. 5,329,619 in view of Brackett et al (Hereafter, Brackett), U.S. Pat. No. 6,519,632.

Regarding claim 9, Page does not explicitly teach at least one of the moderator and the data source comprises a virtual representation of the service broker and wherein the published data updates the virtual representation. However, Page does suggest the system of a service broker for processing data between client and server in a data network (LAN or WAN) [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract] wherein the moderator is a manager such as communication manager/virtual store manager and the data source is server [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract and Col. 16, Lines 26-67 and Col. 28, Lines 41-52].

Brackett, in the same field of client/server network environment endeavor, discloses virtual representation of data are configured and retrieved by the mapping manager for sending to the display monitor [see Brackett, Figs. 2 -3 & 5 -6 & 8 and Col. 5, Line 60 to Col. 6, Line 5 and Col. 8, Line 59 to Col. 9, Line 30]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the implementation of virtual representation data in the network, disclosed by Brackett, into the system of a service broker for processing data between client and

server in a data network as disclosed by Page, in order to enhance the system by extending the use of transferring data to more than one remote devices for reflection of the network device status data on the display [see Brackett, Col. 9, Lines 20-30] . Thus, it would have enabled the status information to be easily monitored and remotely updated in real-time.

Regarding claim 10, Page does not explicitly teach at least one of the moderator and the data source comprises a virtual representation of the connected device and wherein the published data updates the virtual representation. However, Page does suggest the system of a service broker for processing data between client and server in a data network (LAN or WAN) [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract] wherein the moderator is a manager such as communication manager/virtual store manager and the data source is server [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract and Col. 16, Lines 26-67 and Col. 28, Lines 41-52].

Brackett, in the same field of client/server network environment endeavor, discloses virtual representation of data are configured and retrieved by the mapping manager for sending to the display monitor [see Brackett, Figs. 2 -3 & 5 -6 & 8 and Col. 5, Line 60 to Col. 6, Line 5 and Col. 8, Line 59 to Col. 9, Line 30]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the implementation of virtual representation data in the network, disclosed by Brackett, into the system of a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by

extending the use of transferring data to more than one remote devices for reflection of the network device status data on the display [see Brackett, Col. 9, Lines 20-30] . Thus, it would have enabled the status information to be easily monitored and remotely updated in real-time.

Regarding claim 11, Page teaches a method for transferring data from a data source (= server) to a service broker (= service broker 14) comprising the steps of:

providing a data source (= server) and a service broker (= service broker 14);

providing a moderator (= manager such as communication manager/virtual store manager) for receiving the data transferred by the data source (i.e., handling all necessary communication, obtaining the necessary storage and initiating various control blocks, queues and tables, etc.) [see Col. 16, Lines 26-39 and Col. 28, Lines 41-52];

providing a data store for storing data received by the moderator (i.e., managing the available storage and ensuring efficient use of the available storage in a changing environment) [see Col. 28, Line 47-52];

providing a communications module (= dispatcher) for transferring data from the data store (i.e., passing requests to the worker components for processing) [see Col. 16, Lines 45-66];

transferring data from the data source (= server) to the moderator (= manager such as communication manager/virtual store manager) (i.e., establishing the broker environment, obtaining the necessary storage, initiating various control blocks, queues

and tables, setting up a virtual address entry structure for the virtual storage manager, etc.) [see Col. 16, Lines 26-39 and Col. 28, Lines 41-52];

storing the data received by the moderator in the data store (i.e., managing the available storage and ensuring efficient use of the available storage in a changing environment) [see Col. 28, Line 47-52];

retrieving the data from the data store via the communications module (= dispatcher) and forwarding the data to the service broker (i.e., activating worker components and various managers and passing requests to the worker components for processing participant requests worker components consist of all routines that deal with the various functions such as register, send, receive, etc.) [see Col 16, Lines 40-66]. This indicates that worker components process the received requested data forwarded to the broker (= bi-directional communication between data source (=server) and service broker includes data forwarding from the server to the service broker) [see Figs. 6 & 7G & 8 & 9 and Abstract and Col. 16, Lines 40-44].

Page does not explicitly teach providing a virtual representation of the service broker on the data source, the data sent being related to or associated with the virtual representation, updating the virtual representation when the service broker receives the data sent by the data source whereby data is transferred between the data source and to the service broker. However, Page does suggest the system of a service broker for processing data between client and server in a data network (LAN or WAN) [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract] wherein the moderator is a manager such as communication manager/virtual store manager and the data source is a server [see

Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract and Col. 16, Lines 26-67 and Col. 28, Lines 41-52].

Brackett, in the same field of client/server network environment endeavor, discloses virtual representation of data are configured and retrieved by the mapping manager for sending to the display monitor [see Brackett, Figs. 2 -3 & 5 -6 & 8 and Col. 5, Line 60 to Col. 6, Line 5 and Col. 8, Line 59 to Col. 9, Line 30]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the implementation of virtual representation data in the network, disclosed by Brackett, into the system of a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transferring data to more than one remote devices for reflection of the network device status data on the display [see Brackett, Col. 9, Lines 20-30] . Thus, it would have enabled the status information to be easily monitored and remotely updated in real-time.

Regarding claim 18, Page further teaches the data is a command for changing the state of the service broker (i.e., dispatcher constantly monitors the status of all workers and the managers for changes in status and takes appropriate action when a status changes) [see Col. 16, Lines 56-66].

Page does not explicitly teach the virtual representation is updated when the state of the service broker is changed. However, Page does suggest the system of a service broker for processing data between client and server in a data network (LAN or

WAN) [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract] wherein the moderator is a manager such as communication manager/virtual store manager and the data source is a server [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract and Col. 16, Lines 26-67 and Col. 28, Lines 41-52].

Brackett, in the same field of client/server network environment endeavor, discloses virtual representation of data are configured and retrieved by the mapping manager for sending to the display monitor [see Brackett, Figs. 2 -3 & 5 -6 & 8 and Col. 5, Line 60 to Col. 6, Line 5 and Col. 8, Line 59 to Col. 9, Line 30]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the implementation of virtual representation data in the network, disclosed by Brackett, into the system of a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transferring data to more than one remote devices for reflection of the network device status data on the display [see Brackett, Col. 9, Lines 20-30] . Thus, it would have enabled the status information to be easily monitored and remotely updated in real-time.

Regarding claim 19, Page further teaches the data sent is a command for changing the state of the service broker (i.e., dispatcher constantly monitors the status of all workers and the managers for changes in status and takes appropriate action when a status changes) [see Col. 16, Lines 56-66].

Regarding claim 20, Page further teaches the moderator and the data store are the same entity (i.e., moderator = manager such as communication manager and virtual store manager wherein virtual storage manager manages available storage) [see Col. 28, Lines 41-52].

Regarding claim 21, Page further teaches the data store and the communications module are the same device (= all components are in a service broker) [see Col. 16, Lines 26-67].

Regarding claim 22, Page further teaches the moderator, data store, and the communications module are the same entity (= all components are in a service broker) [see Col. 16, Lines 26-67].

Regarding claim 23, Page further teaches there are a plurality of data stores (= queues) (i.e., maintaining relevant information and parameters in several links data structure including control blocks, tables and queues) [see Figs. 6 & 7G & 8 and Col. 19, Line 59 to Col. 20, Line 2 and Col. 45, Line 64 to Col. 46, Line 17].

Regarding claim 24, Page further teaches there are a plurality of service brokers (= multiple brokers) [see Fig. 23].

Regarding claim 25, Page further teaches there are a plurality of moderators (= manager such as communication manager/virtual store manager) [see Col. 28, Lines 41-52] and data stores (= queues) (i.e., maintaining relevant information and parameters in several links data structure including control blocks, tables and queues) [see Figs. 6 & 7G & 8 and Col. 19, Line 59 to Col. 20, Line 2 and Col. 45, Line 64 to Col. 46, Line 17].

Regarding claim 26, Page further teaches the data source (= server) and the service broker are at the same node (= server and broker are at the same node) [see Fig. 23].

Regarding claim 27, Page further teaches the data store is a queue of commands (= message queues) (i.e., maintaining relevant information and parameters in several links data structure including control blocks, tables and queues and message queues are arranged as a linked list like the control blocks) [see Figs. 6 & 7G & 8 and Col. 19, Line 59 to Col. 20, Line 2 and Col. 23, Lines 58-60 and Col. 45, Line 64 to Col. 46, Line 17].

Regarding claim 28, Page further teaches the data transferred from the data store to the service broker is initiated by the service broker (i.e., obtaining the necessary storage and initiating various control blocks, queues and tables, setting up a virtual

address entry structure for the virtual storage manager, etc.) [see Figs. 6 & 7G & 8 and Col. 16, Lines 26-39 and Col. 28, Lines 41-52].

Regarding claim 29, Page further teaches the data is retrieved by specifying a specific device identifier (i.e., service control block (SCB) and conversation control block (CCB) are created including IDs) [see Col. 19, Line 66 to Col. 20, Line 65].

Regarding claim 30, Page further teaches at least one device is connected to the service broker (= client or server is connected to a service broker) [see Fig. 2] and wherein the command is received by the service broker and forwarded to the at least one connected device (= request is forwarded to the server) [see Figs. 5 & 7G & 8].

Regarding claim 33, Page does not explicitly teach the virtual representation comprises a mapped control, group of controls, or user interface. However, Page does suggest the system of a service broker for processing data between client and server in a data network (LAN or WAN) [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract] wherein the moderator is a manager such as communication manager/virtual store manager and the data source is server [see Page, Figs. 2 & 6 & 7G & 8 & 23 and Abstract and Col. 16, Lines 26-67 and Col. 28, Lines 41-52].

Brackett, in the same field of client/server network environment endeavor, discloses virtual representation of data are configured and retrieved by the mapping manager for sending to the display monitor [see Brackett, Figs. 2 -3 & 5 -6 & 8 and Col.

5, Line 60 to Col. 6, Line 5 and Col. 8, Line 59 to Col. 9, Line 30]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the implementation of virtual representation data in the network, disclosed by Brackett, into the system of a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transferring data to more than one remote devices for reflection of the network device status data on the display [see Brackett, Col. 9, Lines 20-30] . Thus, it would have enabled the status information to be easily monitored and remotely updated in real-time.

14. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page et al (Hereafter, Page), U.S. Pat. No. 5,329,619 in view of Brackett et al (Hereafter, Brackett), U.S. Pat. No. 6,519,632 and further in view of Jeske, U.S. Pat. No. 5,974,443.

Regarding claim 12, Page and Brackett do not explicitly teach the data transferred from the data source to the moderator is performed using the HTTP protocol. However, Page does suggest the use of client/server network environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server [see Jeske, Fig. 1 and Col. 2, Line 54 to Col. 3, Line 7]. It would have been obvious to one of

ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server, disclosed by Jeske, into the system of a service broker for processing data between client and server in a data network as disclosed by Page and the system of client/server network environment as disclosed by Brackett, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL.

Regarding claim 13, Page and Brackett do not explicitly teach the data transferred from the moderator to the service broker is performed via the HTTP protocol. However, Page does suggest the use of client/server network environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server [see Jeske, Fig. 1 and Col. 2, Line 54 to Col. 3, Line 7]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server, disclosed by Jeske, into the system of a service broker for processing data between client and server in a data network as disclosed by Page and the system of client/server network environment as disclosed by Brackett, in order to enhance the system by

extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL.

Regarding claim 14, Page and Brackett do not explicitly teach the data is transferred using name/value pairs. However, Page does suggest the use of client/server environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47] with transferred object having attribute information in name/value representation [see Brackett, Col. 4, Lines 25-36].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server for accessing a resource by using command URL wherein request (command) is encoded with name/value pairs [see Jeske, Col. 5, Lines 20-45]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server for accessing a resource by using command URL wherein request is encoded with name/value pairs, disclosed by Jeske, into the system of client/server network environment disclosed by Brackett and a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL wherein

command can be encoded by using name/value pairs for efficiently being sent and easily being identified.

Regarding claim 15, Page and Brackett do not explicitly teach the data is transferred using name/value pairs. However, Page does suggest the use of client/server environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47] with transferred object having attribute information in name/value representation [see Brackett, Col. 4, Lines 25-36].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server for accessing a resource by using command URL wherein request is encoded with name/value pairs [see Jeske, Col. 5, Lines 20-45]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server for accessing a resource by using command URL wherein request (command) is encoded with name/value pairs, disclosed by Jeske, into the system of client/server network environment disclosed by Brackett and a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response command like URL wherein

command can be encoded by using name/value pairs for efficiently being sent and easily being identified.

Regarding claim 16, Page and Brackett do not explicitly teach the name/value pair is transmitted using a field/value abstraction layer. However, Page does suggest the use of client/server network environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47] with transferred object having attribute information in name/value representation [see Brackett, Col. 4, Lines 25-36].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server for accessing a resource by using command URL wherein request (command) is encoded with name/value pairs and wherein name-value pairs are the field name and the field value of a request (command) [see Jeske, Col. 5, Lines 20-45]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server for accessing a resource by using command URL wherein request (command) is encoded with set or group of name/value pairs, disclosed by Jeske, into the system of client/server network environment disclosed by Brackett and a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response

command like URL wherein command can be encoded by using name/value pairs for efficiently being sent and easily being identified.

Regarding claim 17, Page and Brackett and Jeske do not explicitly teach the name/value pair is transmitted using a field/value abstraction layer. However, Page does suggest the use of client/server environment with TCP/IP protocol [see Page, Col. 1, Lines 8-63] and Brackett does suggest the implementation of client/server network environment [see Brackett, Col. 2, Lines 44-47] with transferred object having attribute information in name/value representation [see Brackett, Col. 4, Lines 25-36].

Jeske, in the same field of client/server network environment endeavor, discloses the use of HTTP protocol as communication protocol between client and server for accessing a resource by using command URL wherein request (command) is encoded with name/value pairs and wherein name-value pairs are the field name and the field value of a request (command) [see Jeske, Col. 5, Lines 20-45]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate implementation of HTTP protocol for communicating between client and server for accessing a resource by using command URL wherein request (command) is encoded with set or group of name/value pairs, disclosed by Jeske, into the system of client/server network environment disclosed by Brackett and a service broker for processing data between client and server in a data network as disclosed by Page, in order to enhance the system by extending the use of transaction and accessing information over the World Wide Web environment with a simple request/response

command like URL wherein command can be encoded by using name/value pairs for efficiently being sent and easily being identified.

Other References Cited

15. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Tepper et al, U.S. Pat. No. 5,815,665, discloses providing trusted brokering services over a distributed network.

B) Orr et al, U.S. Pat. No. 6,463,459, discloses executing commands by a virtual process broker on a server communicates with a remote requester and a multiple virtual desktops.

C) Coward, U.S. Pat. No. 6,633,899, discloses facilitating communication among a plurality of devices with a broker.

D) Jardin, U.S. Pat. No. 6,681,327, discloses server broker configured for use in a secured communication network for managing secure client-server transaction.

E) Law et al, U.S. Pat. No. 6,330,602, discloses client-server architecture with an intermediary device.

F) Rosenberg et al, U.S. Pat. No. 6,446,108, discloses client locating services from service providers via a service broker.

G) Colyer, U.S. Pat. 5,862,328, discloses bridging for a client-server environment.

H) Braddy, U.S. Pat. No. 6,141,759, discloses distributing and managing information request in a client/server environment via a request broker.

I) Chou et al, U. S. Pat. No. 6,247,056, discloses handling client request with a distributed web application server via a broker.

16. A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE THREE MONTHS, OR THIRTY DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. FAILURE TO RESPOND WITHIN THE PERIOD FOR RESPONSE WILL CAUSE THE APPLICATION TO BECOME ABANDONED (35 U.S.C. § 133). EXTENSIONS OF TIME MAY BE OBTAINED UNDER THE PROVISIONS OF 37 CAR 1.136(A).

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (703) 308-8767. The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (703) 308-6662.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Philip Tran
Philip B. Tran
Art Unit 2155
May 03, 2004